

03050107-040

(Middle Tyger River)

General Description

Watershed 03050107-040 is located in Greenville and Spartanburg Counties and consists primarily of the **Middle Tyger River** and its tributaries. The watershed occupies 54,597 acres of the Piedmont region of South Carolina. The predominant soil types consist of an association of the Cecil series. The erodibility of the soil (K) averages 0.28, and the slope of the terrain averages 8%, with a range of 2-15%. Land use/land cover in the watershed includes: 63.2% forested land, 22.0% agricultural land, 11.0% urban land, 1.9% scrub/shrub land, 1.1% water, and 0.8% barren land.

The Middle Tyger River accepts drainage from Campbell Creek, Beaverdam Creek (Barnes Creek), and Spencer Creek before flowing into Lyman Lake (Meadow Creek). Downstream of Lyman Lake, another Beaverdam Creek (Foyster Creek, Thompson Branch, Berrys Millpond, Silver Lake) flows into the river followed by Twin Lakes much further downstream. There are numerous ponds and lakes (totaling 578.7 acres) and a total of 97.2 stream miles in this watershed, all classified FW.

Water Quality

<u>Station #</u>	<u>Type</u>	<u>Class</u>	<u>Description</u>
B-794	BIO	FW	MIDDLE TYGER RIVER AT RED TURNER RD, 0.5 MI E. OF SC 101
B-148	P/BIO	FW	MIDDLE TYGER RIVER AT SC 14, 2 MI SSW GOWANSVILLE
B-784	BIO	FW	BEAVERDAM CREEK AT SC 357
B-012	S	FW	MIDDLE TYGER RIVER AT S-42-63
B-014	W/BIO	FW	MIDDLE TYGER RIVER AT S-42-64

Middle Tyger River – There are four monitoring sites along this section of the North Tyger River. At the furthest upstream site (**B-794**), aquatic life uses are fully supported based on macroinvertebrate community data. Aquatic life uses are fully supported at the next site downstream (**B-148**) based on macroinvertebrate community data and physical/chemical data; however, there is a significant increasing trend in turbidity. A significant increasing trend in dissolved oxygen concentration and significantly decreasing trends in five-day biochemical oxygen demand and total phosphorus concentrations suggest improving conditions for these parameters. A very high concentration of zinc was measured in water in 1995 and a very high concentration of cadmium was measured in the 1995 sediment sample. Recreational uses are not supported at this site due to fecal coliform bacteria excursions, compounded by a significant increasing trend in fecal coliform bacteria concentrations. A total maximum daily load (TMDL) has been developed to address this impairment (see Watershed Protection and Restoration Strategies below).

Further downstream (**B-012**), aquatic life uses are fully supported. There is a significant decreasing trend in pH. A significant increasing trend in dissolved oxygen concentration and a significant decreasing trend in five-day biochemical oxygen demand suggest improving conditions for these parameters. Recreational uses are not supported at this site due to fecal coliform bacteria excursions. At the furthest downstream site (**B-014**), aquatic life uses are fully supported based on macroinvertebrate

community data and physical/chemical data. A high concentration of copper was measured in water in 1995. Recreational uses are not supported at this site due to fecal coliform bacteria excursions.

Beaverdam Creek (B-784) - Aquatic life uses are partially supported based on macroinvertebrate community data.

NPDES Program

Active NPDES Facilities

<i>RECEIVING STREAM FACILITY NAME PERMITTED FLOW @ PIPE (MGD) COMMENT</i>	<i>NPDES# TYPE LIMITATION</i>
MIDDLE TYGER RIVER SPARTAN MILLS/STARTEX MILL PIPE #: 002 FLOW: 0.4 WQL FOR BOD5,DO,TRC	SC0002453 MINOR INDUSTRIAL WATER QUALITY
MIDDLE TYGER RIVER TOWN OF LYMAN WWTP PIPE #: 001 FLOW: 4.5 PIPE #: 001 FLOW: 5.0 (PHASE II) PIPE #: 001 FLOW: 6.0 (PHASE III) WQL FOR BOD5,DO,TRC,NH3N	SC0021300 MAJOR DOMESTIC WATER QUALITY WATER QUALITY WATER QUALITY
MIDDLE TYGER RIVER SJWD/WTP PIPE #: 001 FLOW: M/R	SCG643003 MINOR DOMESTIC EFFLUENT

Nonpoint Source Management Program

Land Disposal Activities

Landfill Facilities

<i>LANDFILL NAME FACILITY TYPE</i>	<i>PERMIT # STATUS</i>
WR GRACE – CRYOVAC DIV. INDUSTRIAL	422900-1301 (SCD003341609) -----

Land Application Sites

<i>LAND APPLICATION SYSTEM FACILITY NAME</i>	<i>ND# TYPE</i>
TILEFIELD BLUE RIDGE HIGH SCHOOL	ND0064629 DOMESTIC

Mining Activities

<i>MINING COMPANY MINE NAME</i>	<i>PERMIT # MINERAL</i>
CLARK CONSTRUCTION CO. CLARK-TYGER SAND MINE	0886-45 SAND

AUGUSTA SAND & GRAVEL INC.-GREER PLT.
RESTER MINE

0880-45
SAND & GRAVEL

Water Supply

***WATER USER
STREAM***

***TOTAL PUMP. CAPACITY (MGD)
RATED PUMP. CAPACITY (MGD)***

SJWD
MIDDLE TYGER RIVER

24.0
10.0

Growth Potential

There is a high potential for growth in this watershed, which contains a portion of the Town of Duncan. The Cities of Greer and Spartanburg are connected via the I-85 corridor, which bisects this watershed. There are also industrial developmental pressures along U.S. Hwy. 29.

Watershed Protection and Restoration Strategies

Total Maximum Daily Loads (TMDLs)

A total maximum daily load (TMDL) for fecal coliform has been developed for the Middle Tyger River. Levels of fecal coliform bacteria can be elevated in water bodies as the result of both point and nonpoint sources of pollution. Between 1991 and 1995, 38% of the samples collected at station BE-148 exceeded the 400 colonies/100ml standard. Targeting agricultural land for reduction of bacteria is the most effective strategy for this watershed.

A target level for fecal coliform bacteria of 175 colonies/100ml was established. This translates to an agricultural bacteria-loading reduction of 68%. Forested lands are not targeted for reduction, as there are currently no acceptable means of reducing fecal coliform sources within that land use.

There are several tools available for implementing this TMDL, such as Nonpoint Source (NPS) pollution outreach activities and materials. SCDHEC will continue to monitor water quality in the Middle Tyger River to evaluate the effectiveness of these measures.

Funding for TMDL implementation activities is currently available. For more information, see the Bureau of Water web page www.scdhec.net/water or call the Watershed Program at (803) 898-4300.